

FIG. 1A

FIG. 1B is a diagram illustrating a sequence of operations or states over time. The diagram is organized into three main horizontal sections, each representing a different code or state. The first section, labeled 'Code 1', shows a sequence of states S1, S2, and S3. The second section, labeled 'Code 2', shows a sequence of states S1, S2, and S3, with a specific time interval τ_2 marked between S1 and S2. The third section, labeled 'Code i', shows a sequence of states S1, S2, and S3, with a specific time interval τ_i marked between S1 and S2. The diagram is bounded by vertical lines representing time intervals $\tau_1 - T$, τ_1 , $\tau_1 + T$, and $\tau_1 + 2T$.

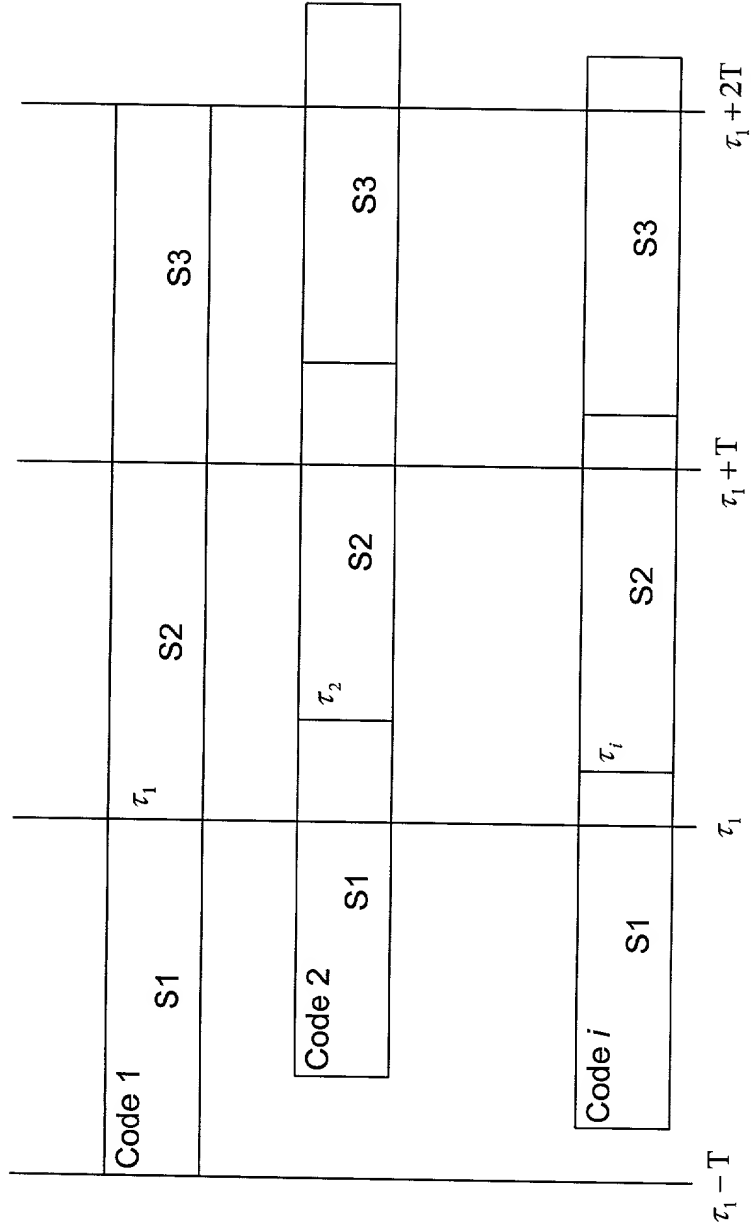


FIG. 1B

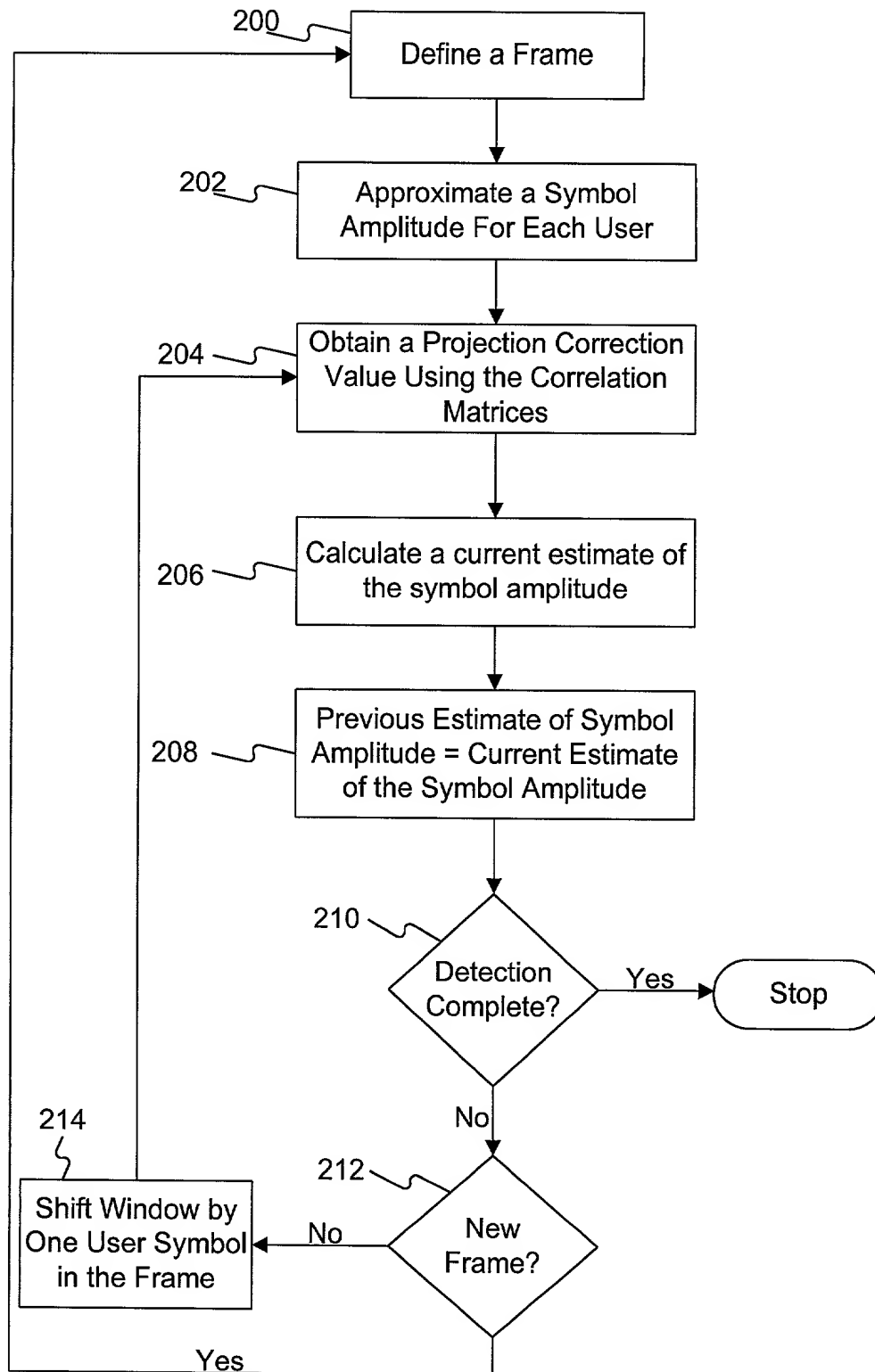


FIG. 2

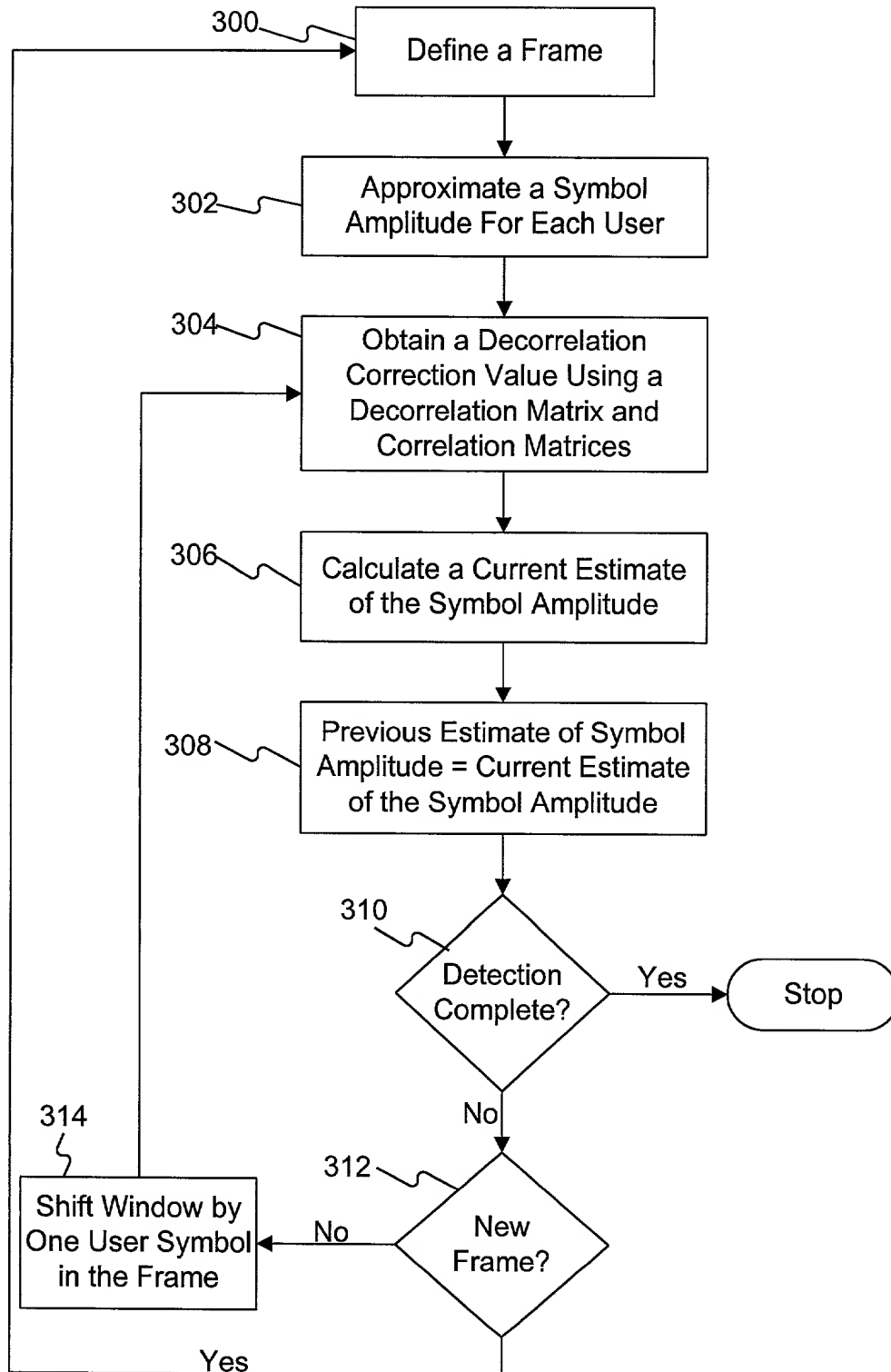


FIG. 3

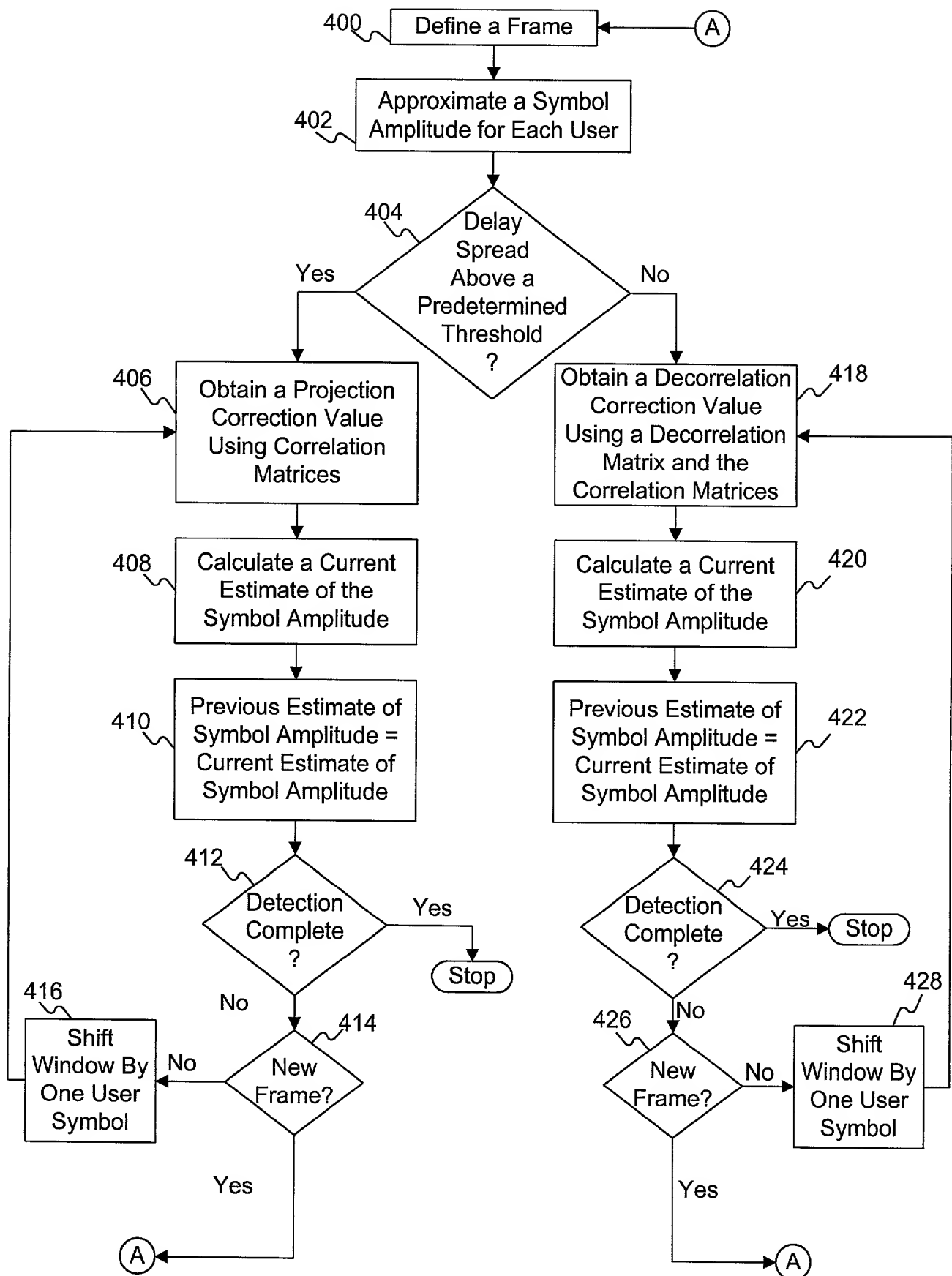


FIG. 4

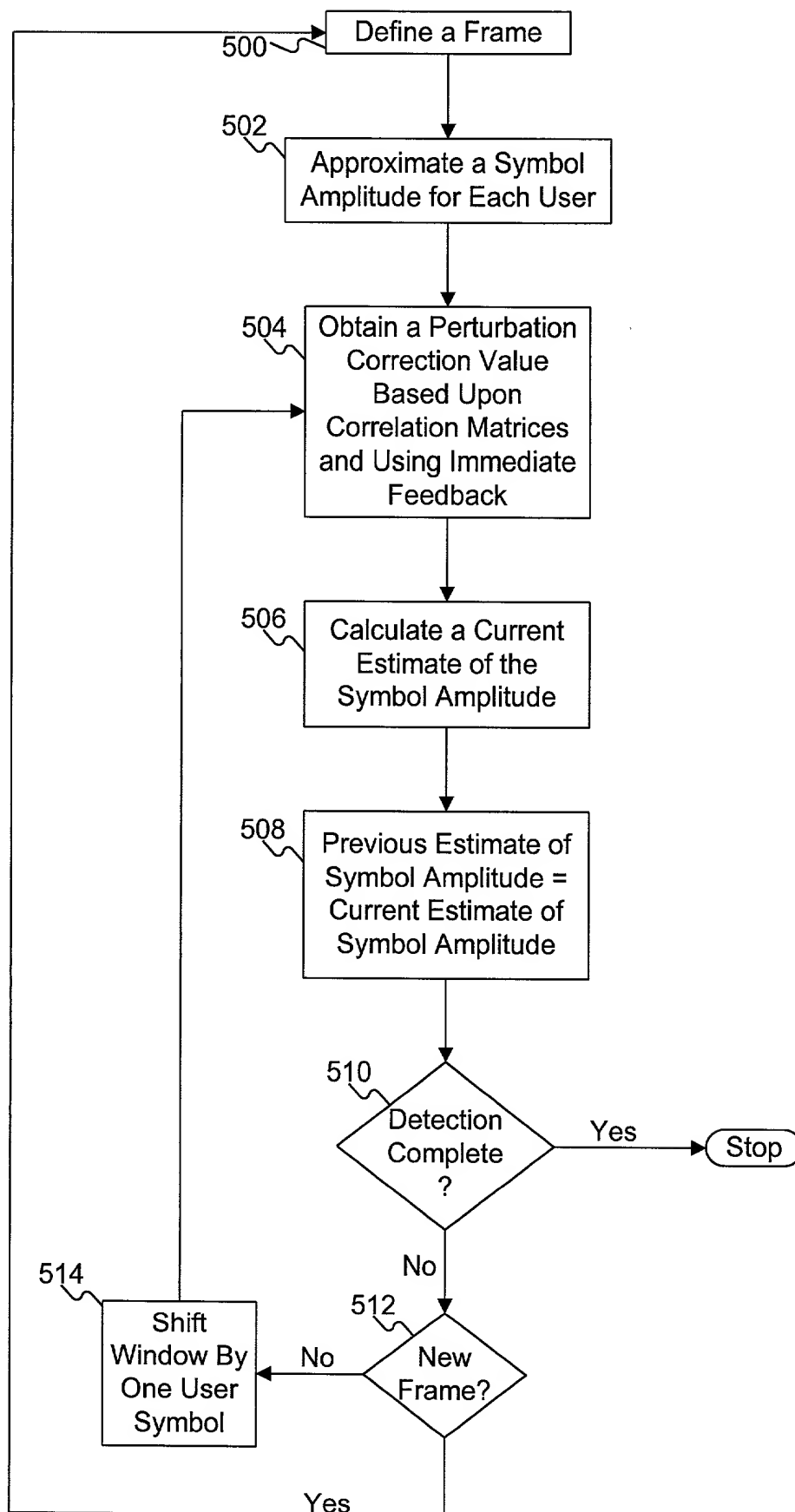


FIG. 5

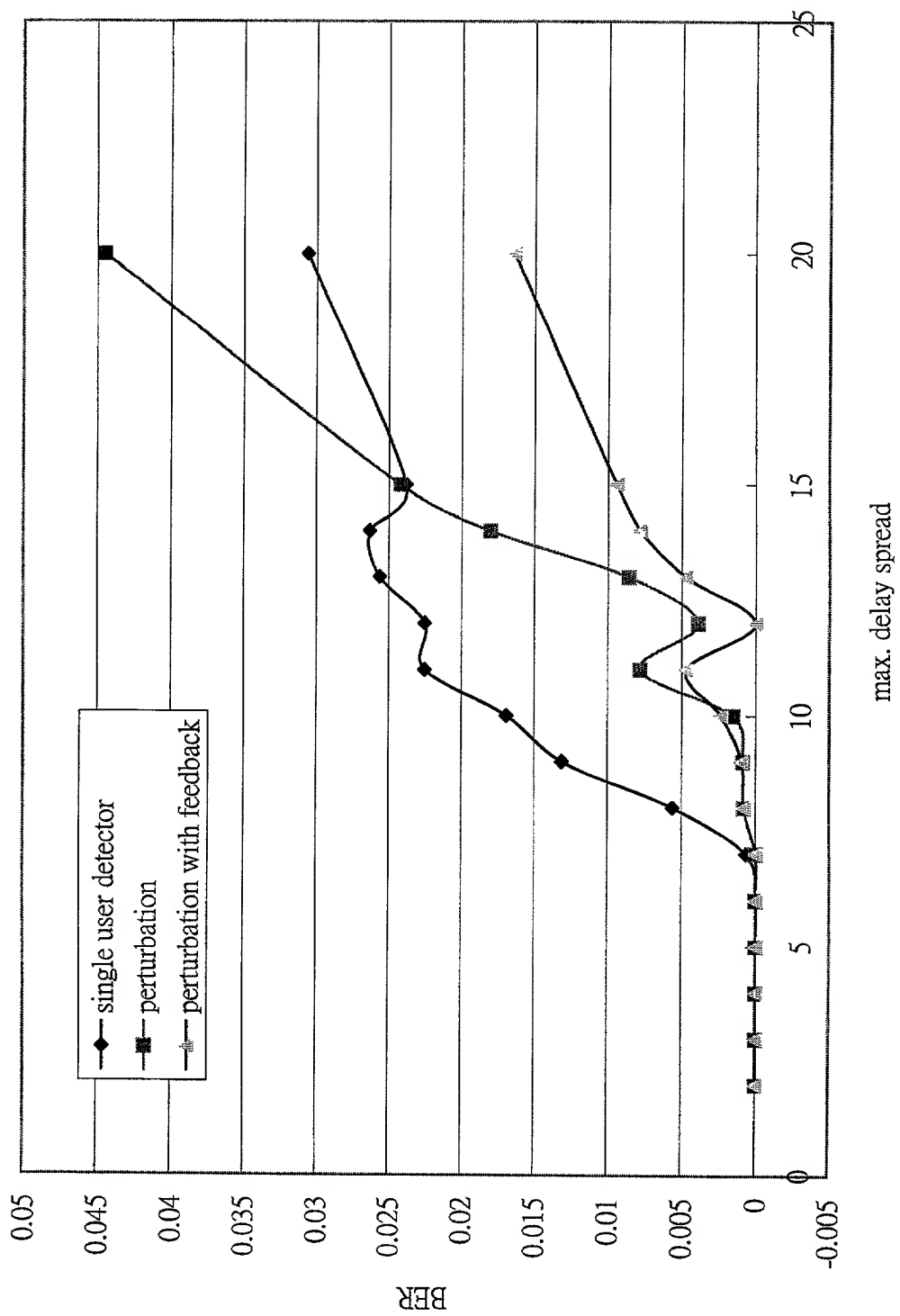


FIG. 6

Figure 7 shows the Bit Error Rate (BER) versus the maximum delay spread for three different detection methods: single user detection, perturbation, and perturbation with feedback. The x-axis represents the maximum delay spread in samples, ranging from 0 to 35. The y-axis represents the BER, ranging from 0 to 0.16. The legend indicates that the solid line with diamond markers represents single user detection, the solid line with square markers represents perturbation, and the solid line with triangle markers represents perturbation with feedback. All three methods show a decrease in BER as the maximum delay spread increases, with perturbation with feedback consistently achieving the lowest BER across the range of delay spreads.

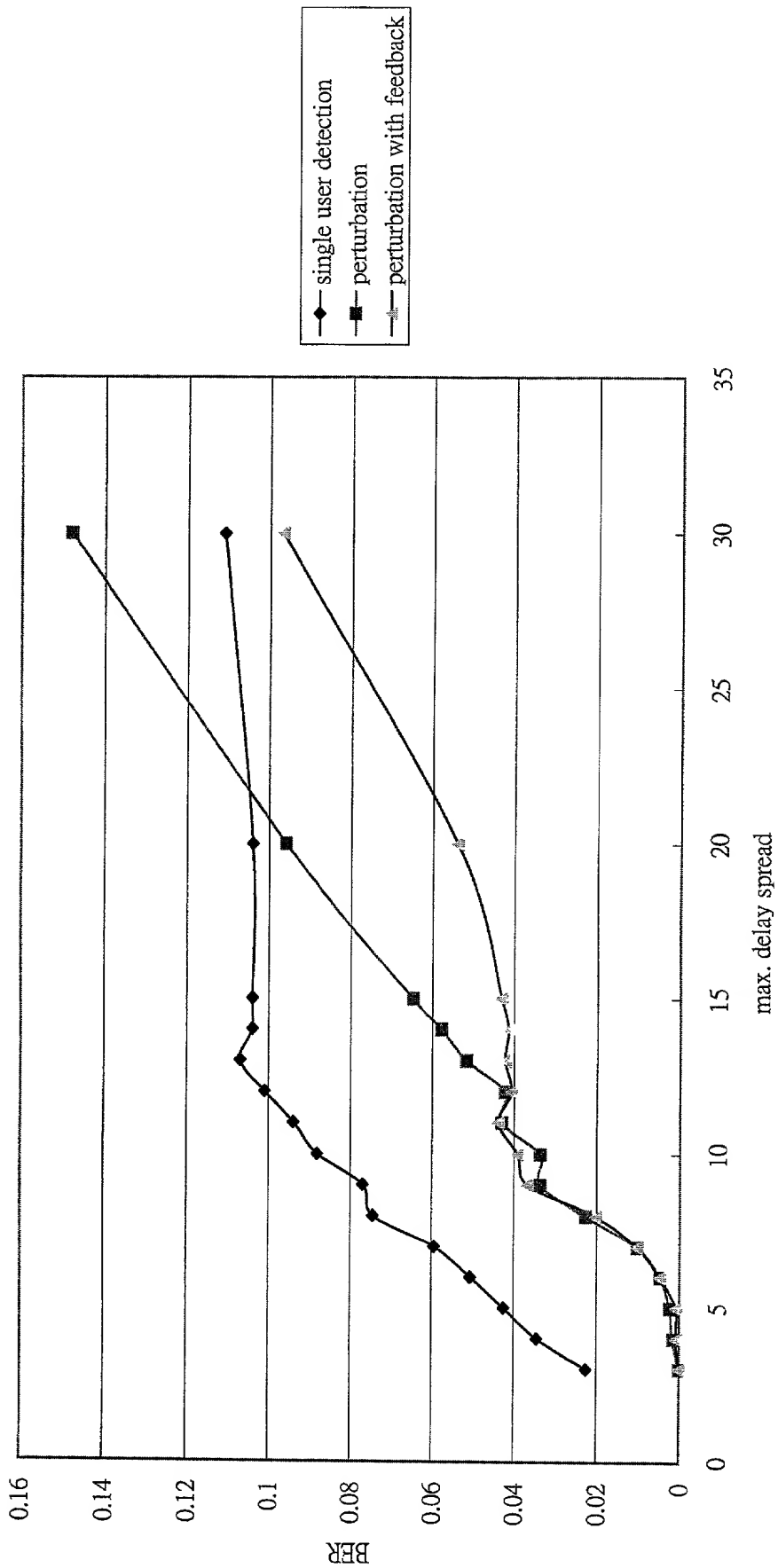


FIG. 7

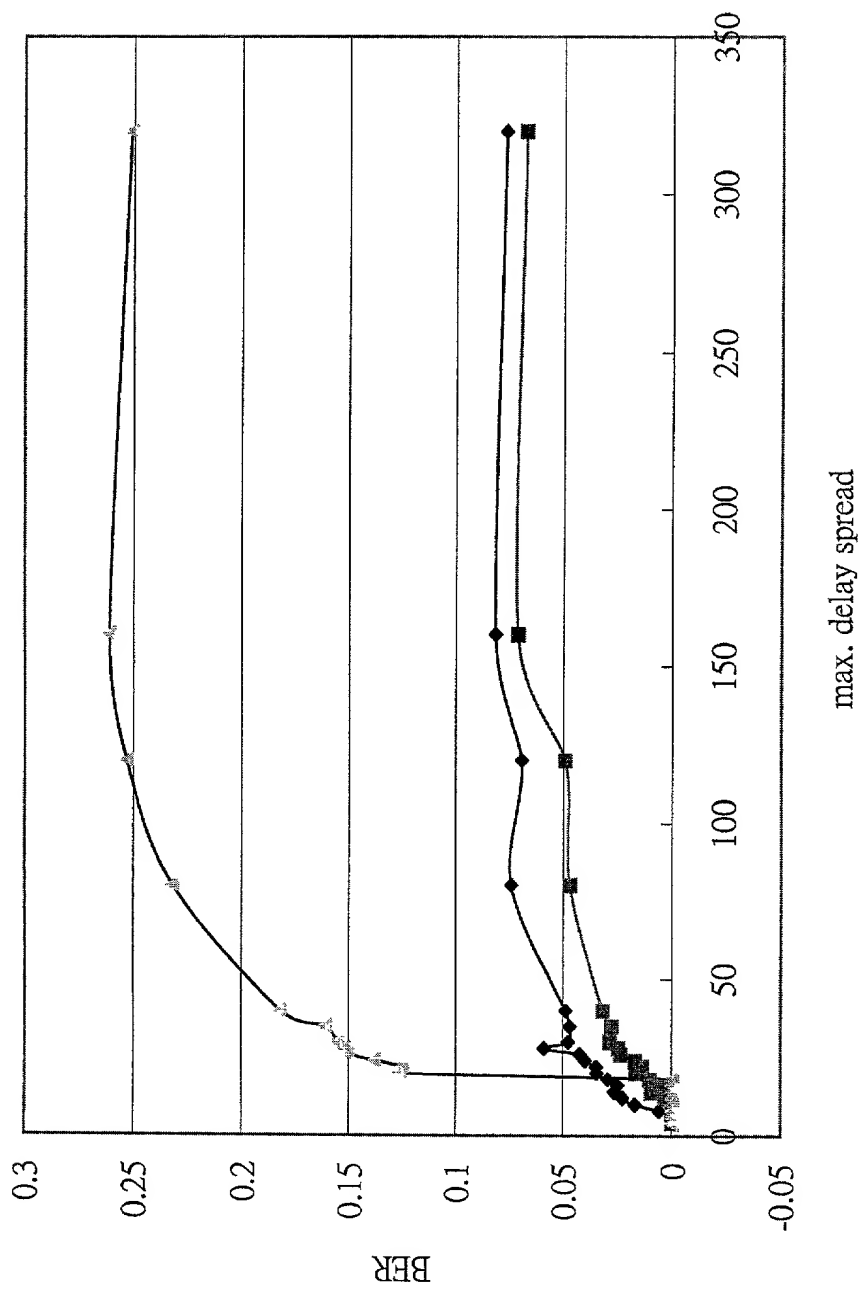
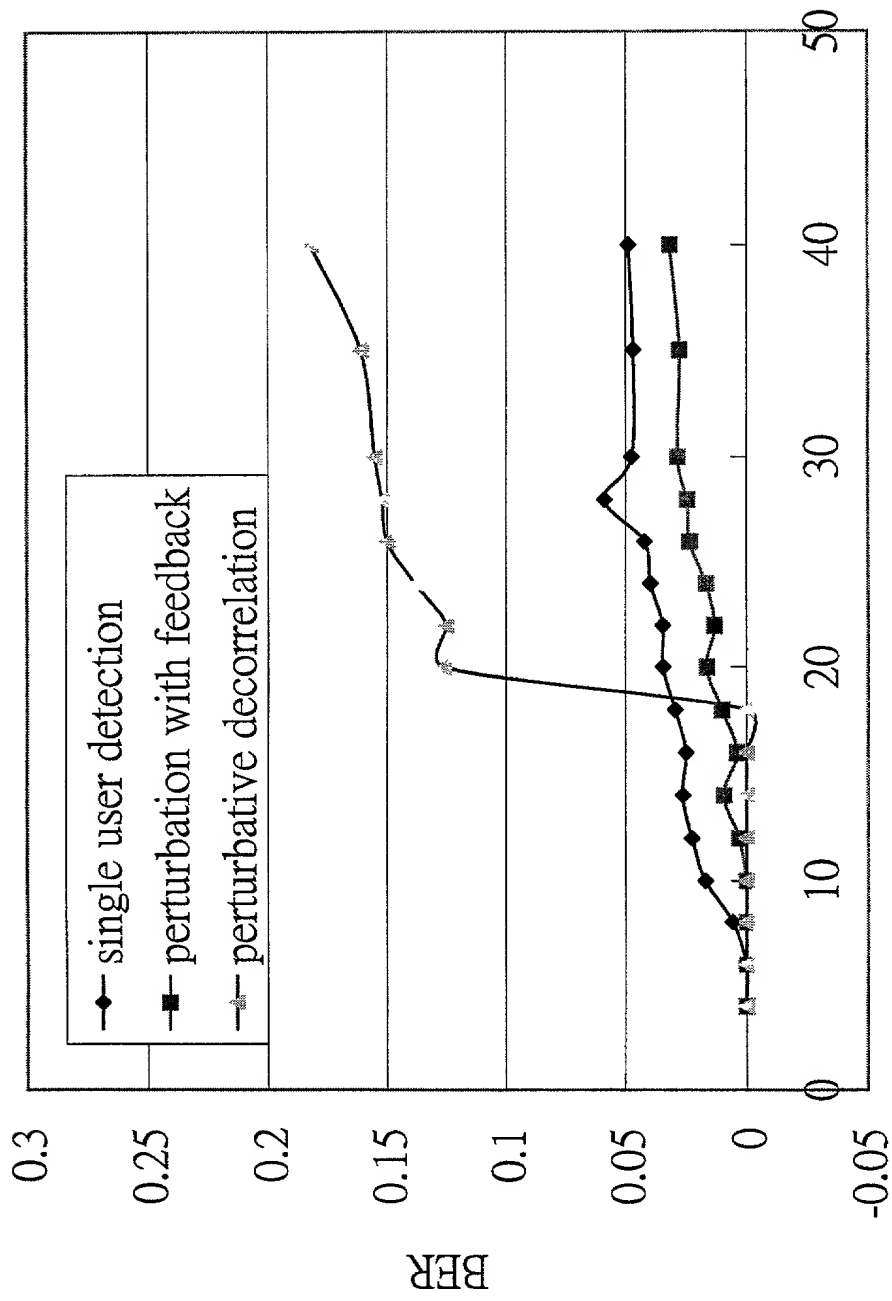


FIG. 8

FIG. 9 is a line graph showing the Bit Error Rate (BER) versus the maximum delay spread for three different receiver processing techniques: single user detection, perturbation with feedback, and perturbative decorrelation. The x-axis represents the maximum delay spread in samples, ranging from 0 to 50. The y-axis represents the BER, ranging from -0.05 to 0.3. The legend indicates that the diamond markers represent single user detection, the square markers represent perturbation with feedback, and the triangle markers represent perturbative decorrelation. All three curves show a sharp increase in BER as the delay spread increases, with single user detection showing the highest BER and perturbative decorrelation showing the lowest BER.



max. delay spread

FIG. 9

FIG. 10 is a graph showing the Bit Error Rate (BER) versus the maximum delay spread for three different detection methods: Single user detection, 1st order projection, and 3rd order projection. The x-axis represents the maximum delay spread in units of 10, ranging from 0 to 140. The y-axis represents the BER, ranging from -0.02 to 0.16. The 3rd order projection method consistently shows the lowest BER across the entire range of delay spread, while the Single user detection method shows the highest BER.

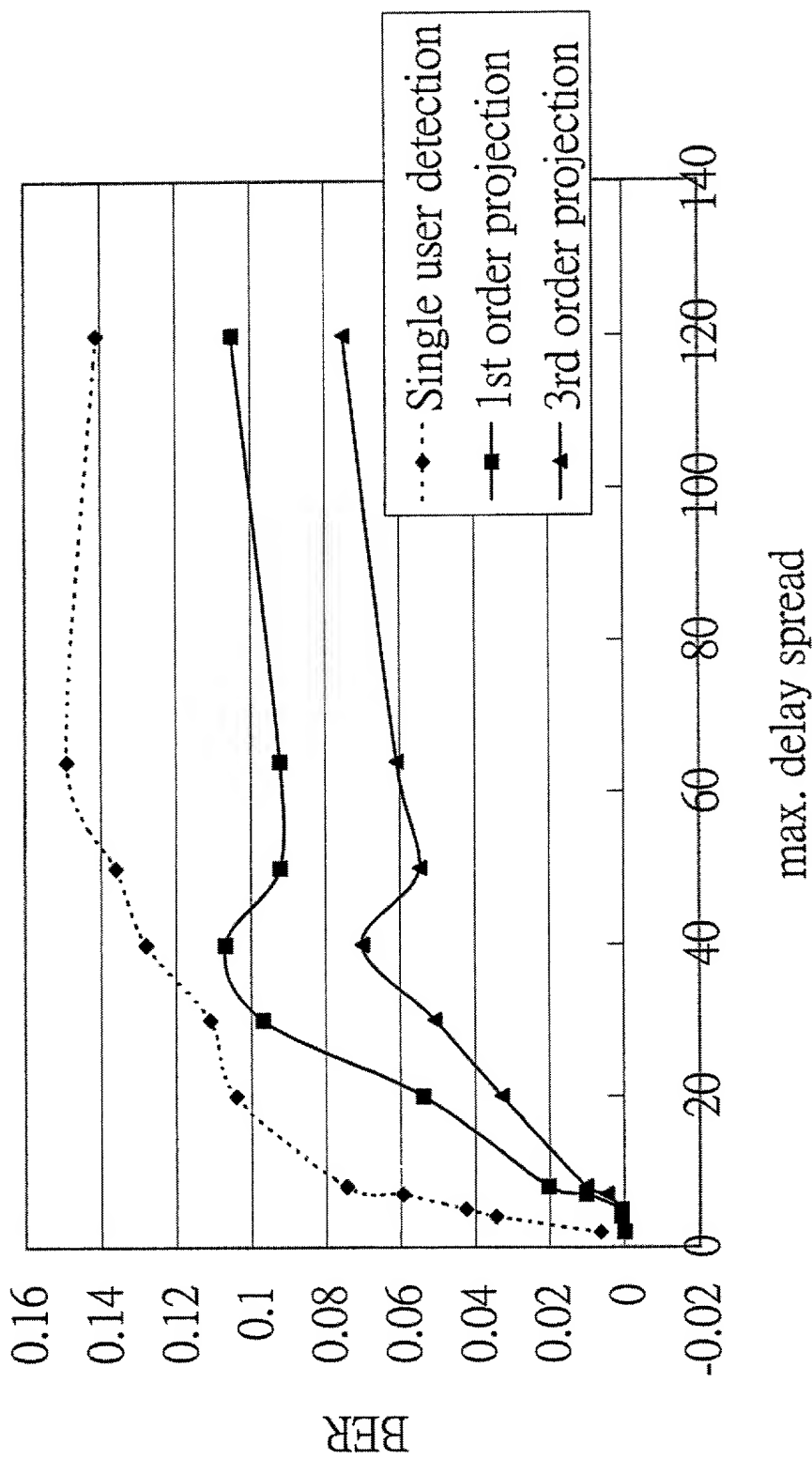


FIG. 10

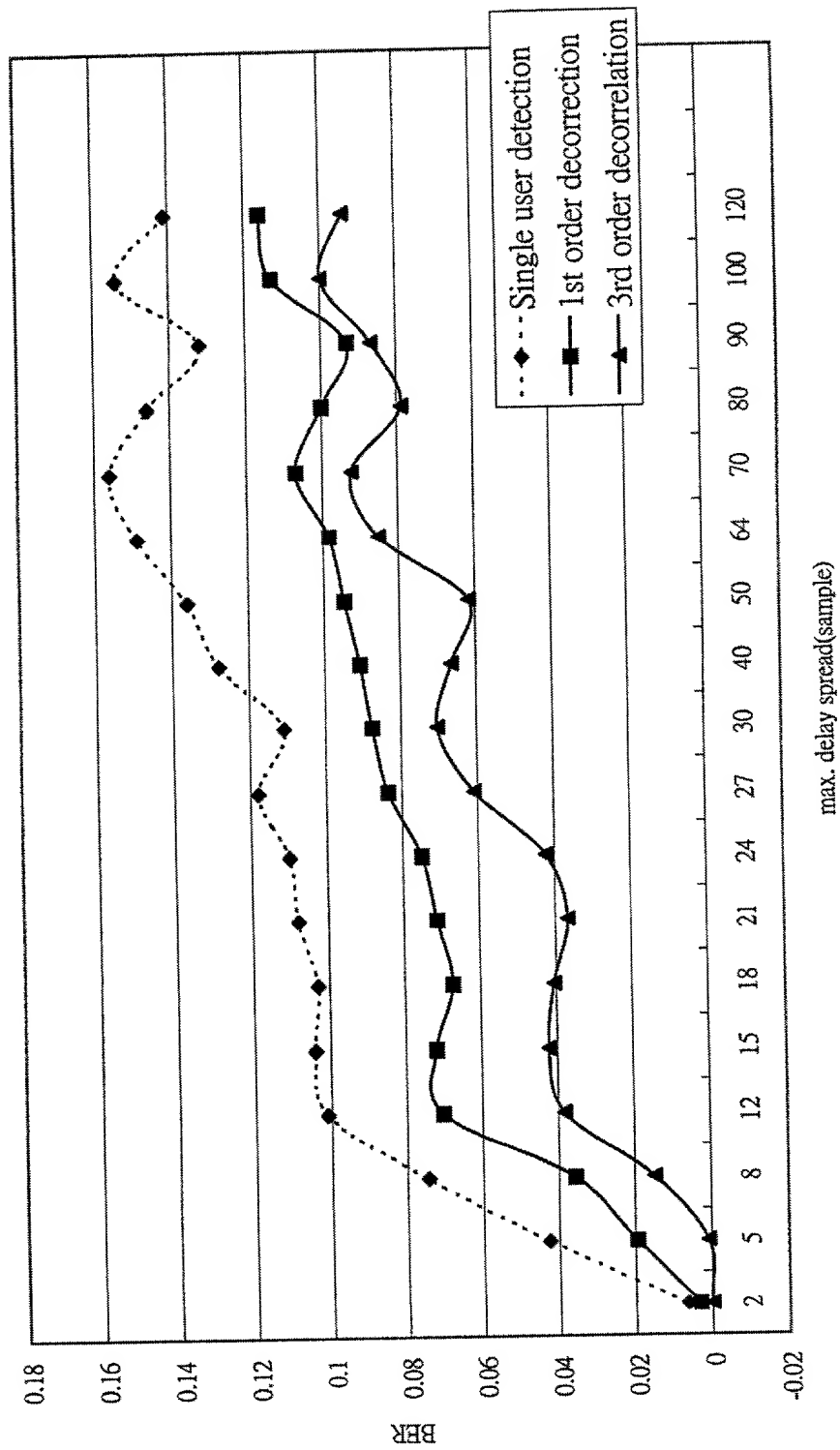


FIG. 11